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☐ Initial submission ☒ Revised version ☐ Final submission

Life Sciences Reporting Summary

Nature Research wishes to improve the reproducibility of the work that we publish. This form is intended for publication with all accepted life science papers and provides structure for consistency and transparency in reporting. Every life science submission will use this form; some list items might not apply to an individual manuscript, but all fields must be completed for clarity.

For further information on the points included in this form, see Reporting Life Sciences Research. For further information on Nature Research policies, including our data availability policy, see Authors & Referees and the Editorial Policy Checklist.

Experimental design

1. Sample size

Describe how sample size was determined.

Prior data indicated that the difference in oral fungal burden in the mouse model of OPC within each subject group was normally distributed with a standard deviation 0.2 log CFU/g tissue. If the true difference in the mean response of matched pairs is 0.5, the use of 4 pairs of mice would be sufficient to reject the null hypothesis with a probability (power) >0.9. The Type I error probability associated with this test of this null hypothesis is 0.05.

2. Data exclusions

Describe any data exclusions.

No data were excluded

3. Replication

Describe whether the experimental findings were reliably reproduced.

All key experimental findings were reproduced.

4. Randomization

Describe how samples/organisms/participants were allocated into experimental groups.

The mice were randomized to the two different treatment groups.

5. Blinding

Describe whether the investigators were blinded to group allocation during data collection and/or analysis.

The observers were not blinded to the treatment. However, the outcomes (weight loss, cytokine levels, and oral fungal burden) were quantitative and not subjective.

Note: all studies involving animals and/or human research participants must disclose whether blinding and randomization were used.

6. Statistical parameters

For all figures and tables that use statistical methods, confirm that the following items are present in relevant figure legends (or in the Methods section if additional space is needed).

n/a	Confirmed
☐	☒ The exact sample size (*n*) for each experimental group/condition, given as a discrete number and unit of measurement (animals, litters, cultures, etc.)
☐	☒ A description of how samples were collected, noting whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
☐	☒ A statement indicating how many times each experiment was replicated
☐	☒ The statistical test(s) used and whether they are one- or two-sided (note: only common tests should be described solely by name; more complex techniques should be described in the Methods section)
☐	☒ A description of any assumptions or corrections, such as an adjustment for multiple comparisons
☐	☒ The test results (e.g. *P* values) given as exact values whenever possible and with confidence intervals noted
☐	☒ A clear description of statistics including central tendency (e.g. median, mean) and variation (e.g. standard deviation, interquartile range)
☐	☒ Clearly defined error bars

See the web collection on statistics for biologists for further resources and guidance.

Software

Policy information about availability of computer code

7. Software

Describe the software used to analyze the data in this study.	GraphPad Prism

For manuscripts utilizing custom algorithms or software that are central to the paper but not yet described in the published literature, software must be made available to editors and reviewers upon request. We strongly encourage code deposition in a community repository (e.g. GitHub). *Nature Methods* guidance for providing algorithms and software for publication provides further information on this topic.

Materials and reagents

Policy information about availability of materials

8. Materials availability

Indicate whether there are restrictions on availability of unique materials or if these materials are only available for distribution by a for-profit company.	All materials used in the study are available to other researchers.

9. Antibodies

Describe the antibodies used and how they were validated for use in the system under study (i.e. assay and species).	All antibodies were purchased from commercial sources.

10. Eukaryotic cell lines

a. State the source of each eukaryotic cell line used.	The OKF6/TERT-2 cell line was used. It was obtained from Jim Rheinwald at Harvard.
b. Describe the method of cell line authentication used.	RNA-seq analysis
c. Report whether the cell lines were tested for mycoplasma contamination.	It was tested and found to be uncontaminated.
d. If any of the cell lines used are listed in the database of commonly misidentified cell lines maintained by ICLAC, provide a scientific rationale for their use.	N/A

Animals and human research participants

Policy information about studies involving animals; when reporting animal research, follow the ARRIVE guidelines

11. Description of research animals

Provide details on animals and/or animal-derived materials used in the study.	Mice -Male Balb/C. Purchased from Taconic Laboratories -Male EphA2-/-. Provided by A. Wayne Orr at LSU Health Sciences Center Shreveport. For genotyping of EphA2 knockout mice primers were used: 16316 EphA2 Rev TTC AGC CAA GCC TAT GTA GAA AGC; 16122 Neo Rev EphA2 CGC CAA TGA CAA GAC GCT GG; 15802 EphA2 Fwd CGC TAT TCA GAA CCT CCT CAC G. PCR bands: EphA2 KO ~ 300 bp; WT ~ 500 bp -Male C57BL/6J mice. Purchased from Jackson Laboratory

Policy information about studies involving human research participants

12. Description of human research participants

Describe the covariate-relevant population characteristics of the human research participants.	N/A